Section 9. Summary of Safety and Effectiveness

#### 510(K) SUMMARY OF SAFETY AND 9. **EFFECTIVENESS**

This summary of safety and effectiveness information is being submitted in accordance with the requirements of The Safety Medical Devices Act of 1990 (SMDA 1990) and 21 CFR Part 807.92.

Assigned 510(k) Number: <u><u><u>K040451</u></u></u>

Date of Summary Preparation: February 12, 2004

Manufacturer:

Pharmacia Deutschland GmbH,

Diagnostics Division Munzinger Strasse 7

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Company Contact Person:

Michael Linss

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**Diagnostics Division** Munzinger Strasse 7

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Device Name:

Varelisa® ß2-Glycoprotein I IgM Antibodies

Common Name:

B2-Glycoprotein I autoantibody immunological test system

#### Classification

Product Name	<b>Product Code</b>	Class	<u>CFR</u>
Varelisa® ß2-Glycoprotein I IgM Antibodies	MSV	П	866.5560

# Substantial Equivalence to

INOVA QUANTA Lite™ β2 GPI IgM

#### **Intended Use Statement**

The Varelisa  $\beta_2$ -Glycoprotein I IgM Antibodies EIA kit is designed for the semiquantitative and qualitative determination of  $\beta_2$ -glycoprotein I IgM antibodies in serum or plasma.

The presence of  $\beta_2$ -glycoprotein I antibodies can be used in conjunction with clinical findings and other laboratory tests to aid in the diagnosis of thrombotic disorders related to the primary Antiphospholipid Syndrome or occurring secondary to systemic lupus erythematosus (SLE) or other autoimmune diseases.

#### **General Description of the Device**

The Varelisa  $\beta$ 2-Glycoprotein I IgM Antibodies Assay is an indirect noncompetitive enzyme immunoassay for the semiquantitative and qualitative determination of  $\beta$ 2-glycoprotein I IgM antibodies in serum or plasma.

The test kit contains microplate strips coated with human purified B2-glycoprotein I, calibrators, positive and negative controls, enzyme-labeled conjugate, substrate and substrate stop solution, buffered diluent and wash buffer

### Varelisa® B2-Glycoprotein I IgM Antibodies Test Principle

Varelisa  $\beta_2$ -Glycoprotein I IgM Antibodies is an indirect noncompetitive enzyme immunoassay for the semiquantitative and qualitative determination of  $\beta_2$ -glycoprotein I IgM antibodies in human serum or plasma. The wells of a microplate are coated with human purified  $\beta_2$ -glycoprotein I antigen. Antibodies specific for  $\beta_2$ -glycoprotein I present in the patient sample bind to the antigen.

In a second step the enzyme labeled second antibody (conjugate) binds to the antigen-antibody complex which leads to the formation of an enzyme labeled conjugate-antibody-antigen complex. The enzyme labeled antigen-antibody complex converts the added substrate to form a colored solution.

The rate of color formation from the chromogen is a function of the amount of conjugate complexed with the bound antibody and thus is proportional to the initial concentration of the respective antibodies in the patient sample.

## **Device Comparison**

QUANTA LiteTM  $\beta$ 2 GPI IgM (predicate device) and Varelisa  $\beta_2$ -Glycoprotein I IgM Antibodies (new device) both are indirect noncompetitive enzyme immunoassays for semiquantitative and qualitative determination of IgM antibodies against  $\beta_2$ -Glycoprotein I in serum. Both assays recommend the same sample dilutions and use comparable antigens and enzyme-linked conjugates.

Based on currently available data from the literature the measuring of the antibodies against  $\beta$ 2-glycoprotein I not only provides aid in the diagnosis of thrombotic disorders secondary to systemic lupus erythematosus or other autoimmune diseases, but also aids in the diagnosis of the primary

antiphospholipid syndrome. Thus the intended use of Varelisa  $\beta$ 2-glycoprotein I Antibodies Screen was adapted to the current state of scientific knowledge. The corresponding literature is cited in the directions for use.

A difference between both assays is that the INOVA QUANTA Lite<sup>TM</sup> β2 GPI IgM is only recommended for use in serum specimen while the PHARMACIA Varelisa β2-glycoprotein I IgM Antibodies is outlined for use with serum and plasma. Corresponding performance data underline the effectiveness of the assay with plasma as sample. Minor differences between both assays are restricted to contents of buffers and stop solution. The INOVA QUANTA Lite<sup>TM</sup> β2 GPI IgM assay is evaluated by using the decision point method. PHARMACIA Varelisa β2-glycoprotein I IgM Antibodies assay uses an ODcutoff for evaluation. Corresponding performance data show the comparability of the results.

# Laboratory equivalence

The comparability of QUANTA LiteTM  $\beta 2$  GPI IgM and Varelisa  $\beta_2$ -Glycoprotein I IgM Antibodies is supported by a data set including

- results obtained within a comparison study analyzing positive, equivocal and negative sera.
- results obtained for externally defined Calibrators.
- results obtained for samples from apparently healthy subjects (normal population).

The data show that the assay performs as expected from the medical literature. Furthermore the performance data show that the device is suitable for serum and plasma samples.

In summary, all available data support that the new device, PHARMACIA Varelisa  $\beta_2$ -Glycoprotein I IgM Antibodies Assay is substantially equivalent to the predicate device, INOVA QUANTA Lite<sup>TM</sup>  $\beta_2$  GPI IgM Assay, and that the new device performs according to state-of-the-art expectations.

# DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration 2098 Gaither Road Rockville MD 20850

## MAY 1 1 2004

Michael Linss, Ph.D.
Manager, Compliance & Quality
Pharmacia Deutschland GMBH
Diagnostics Division
Munzinger Strasse 7
Freiburg,
Germany D-79111

Re:

k040451

Trade/Device Name: Varelisa® ß2 Glycoprotein I IgM Antibodies

Regulation Number: 21 CFR 866.5660

Regulation Name: Multiple autoantibodies immunological test system

Regulatory Class: Class II Product Code: MSV Dated: April 27, 2004 Received: April 30, 2004

Dear Dr. Linss:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820).

If you desire specific information about the application of labeling requirements to your device, or questions on the promotion and advertising of your device, please contact the Office of In Vitro Diagnostic Device Evaluation and Safety at (301) 594-3084. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address http://www.fda.gov/cdrh/dsma/dsmamain.html.

Sincerely yours,

Joseph L. Hackett, Ph.D.

Acting Director

Division of Immunology and Hematology Devices Office of In Vitro Diagnostic Device Evaluation and Safety Center for Devices and Radiological Health

**Enclosure** 

510(k) Submission Section 1. Indications for Use Statement			
510(k) Number: <u>V01046</u>			
Device Name: Varelisa® 62-Glycoprotein I IgM Antibodies			
Intended Use Statement			
The Varelisa β2-Glycoprotein I IgM Antibodies EIA kit is designed for the semiquantitative and qualitative determination of β2-glycoprotein I IgM antibodies is serum or plasma.  The presence of β2-glycoprotein I antibodies can be used in conjunction with clinical findings and other laboratory tests to aid in the diagnosis of thrombotic disorder related to the primary Antiphospholipid Syndrome or occurring secondary to systemic lupus erythematosus (SLE) or other autoimmune diseases.			
Mana Chan Division Sign-Off Office of In Vitro Diagnostic			
Device Evaluation and Safety  510(k) <u>K04045</u> /			
(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)			
Concurrence of CDRH, Office of Device Evaluation (ODE)			
Prescription Use OR Over-The-Counter Use			
(Per 21 CFR 801.109)			

Varelisa® **ß2-Glycoprotein I IgM Antibodies – New Device**